Attachment A

The testing was performed with of Sorenson. The testing that occurred in this document took place on December 7, 2011.				
The first call was from at 2:10 PM. called in using a Z4 on PC. They first asked if we had another ntouch VP that they could test with so that they could keep one on call for the whole duration of testing, while using the other for test calls of other endpoints of theirs. However, all of the other phones we had on production were on alpha builds, so we instead used Google Talk Chat. That conversation is saved in my scratch folder for those interested in the conversation. Once conversation with Google Chat was established, the first battery of testing commenced with outgoing calls to their endpoints (ntouch VP -> X), in the following order:				
Z-4 on PC 2:14 PM with				
Z-20 2:17 PM with				
Z-340 2:19 with				
Z-OJO 2:22 with				
Z-150 2:24 with				
All connections were successful. Video streamed both ways. Conversations were short, such as "Can you see me?" and "What is the next test?", etc. After this we then called into their ZVRS system with at 2:32 PM, which was successful. We then tested if the ntouch VP could leave a video mail (their version of SignMail) at 2:36 PM. From all indications that I could tell, it was successful.				
The next battery of tests included the following of them calling ntouch VP (X -> ntouch VP) in the following order:				
Z-4 on PC 2:47 PM with				
Z-20 2:50 PM with				
Z-340 2:52 PM with				
Z-OJO 2:53 PM with				
We then did ZVRS call ntouch VP 2x, once at 2:57 PM, and again at 2:58 PM, again with Neither had issues present. After this, they attempted to send me a video mail at 3:02 PM. When this test failed, asked for how our P2P video messaging worked (more specifically, if it was a Sorenson Only thing) at 3:14 PM on a call with Z4 on PC. I replied that I knew that it worked from ntouch VP to ntouch VP, but that I was not a developer and that I was not familiar enough with the designs of how that works to answer the question properly.				

ntouch VP (Deaf SignMail). I replied that no, it does not. When the call completed (on the endpoint), I also added in Google Talk that I was not familiar with the workings of video messaging to answer their questions. They then did a few more calls from Z4 on PC to my videophone, once at 3:15, 3:25, and 3:26 PM. These were done with

Attachment B

me: testing. hello!@ Sent at 2:09 PM on Wednesday ok, can you please call 727-Sent at 2:10 PM on Wednesday did you get this message? me: You can see us, yes? yes we will start the capture soon will need you to call back again... wait until we are ready ok go ahead and hang up and call back ok great... ok go ahead and hang up ok next number to call: 727 ok done with that one hang up Sent at 2:16 PM on Wednesday ok next number to call is: 727 Sent at 2:18 PM on Wednesday me: That was a Z-340, correct? yes that was a z340 soon ready for another test Sent at 2:20 PM on Wednesday Next one is 727 Sent at 2:21 PM on Wednesday ok can hang up ok another test: 727 ok hang up another test: will need a min or two to make a change then will do another test Sent at 2:26 PM on Wednesday sorry... still setting up for the next test call 866 (will see our front door) Sent at 2:29 PM on Wednesday ok another call to see if you get our videomail hold on.. Sent at 2:30 PM on Wednesday call this number and you should get videomail (let us know if looks OK to you) Setting it up now... give us a minute 424 Sent at 2:33 PM on Wednesday how did it go? me: sorry, I'm trying now. ok Sent at 2:36 PM on Wednesday me: How did it go? ok you can hang up we're looking now to make sure we got it

did you see the videomail

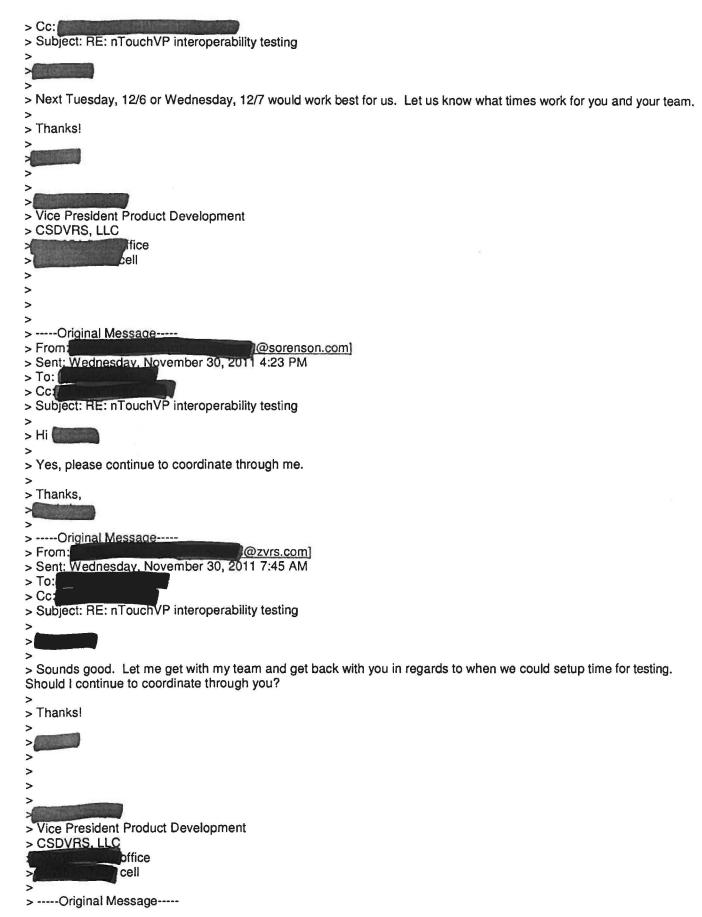
were you able to leave a message? me: I was able to leave a message for you. great ok... making sure we have it all now hold Next, we'll be calling you so just be ready to answer the phone me: I'm ready when you are. Sent at 2:41 PM on Wednesday ok another call soon will need you to answer it me: ok Sent at 3:02 PM on Wednesday still setting it up Sent at 3:07 PM on Wednesday calling you Sent at 3:09 PM on Wednesday me: ready when you are. Sent at 3:10 PM on Wednesday will tell you when to call us sorry, will call you again first then will have you call us Sent at 3:14 PM on Wednesday ok hold... will have you call us back me: ok Just send me the number. Sent at 3:15 PM on Wednesday ok hold on setting up Sent at 3:16 PM on Wednesday a few more mins me: ok So, just to be clear about the video mail thing. I'm not sure how all the design works on that. Sent at 3:20 PM on Wednesday ok ok you can go ahead and call us at the same number we just called you at Sent at 3:23 PM on Wednesday thanks very much for your time!!! appreciate it all

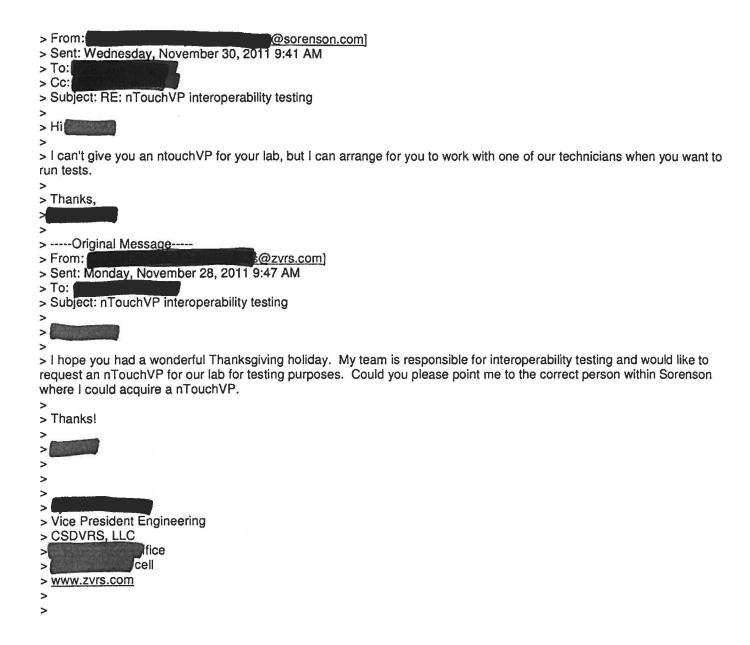
me: No problem.

Attachment C

From: @zvrs.com] Sent: Monday, December 05, 2011 1:05 PM To: Cc: Subject: RE: nTouchVP interoperability testing Great! Just let us know what number to call you at on Wednesday at 2 PM Mountain time. ----Original Message----From: @sorenson.com] Sent: Friday, December 02, 2011 5:02 PM To: Cc: Subject: RE: nTouchVP interoperability testing Perfect, we'll sync up next week to work out the details (phone numbers, etc.). Have a great weekend! ----Original Message----@zvrs.com] From: Sent: Friday, December 02, 2011 2:54 PM To: Cc: Subject: Re: nTouchVP interoperability testing Works for us! On Dec 2, 2011, at 4:45 PM, @sorenson.com> wrote: > Hi is out of the office today, but it looks like Wed 12/7 after 2:00 Mountain time would work best for us. > Does that work for you? > Thanks, > ----Original Message-----@zvrs.com] > From: > Sent: Friday, December 02, 2011 2:39 PM

> To:





Attachment D

With the later than t
From: Sent: Tuesday, March 22, 2011 5:46 PM To: zvrs.com Cc: Subject: RE: Interoperability between VRS devices
Hi
We weren't able to catch you this afternoon on a call. Will you be available tomorrow? Our engineering team has looked at the packet capture and we're ready to talk about what we're seeing.
Test & QA Sr Manager Sorenson Communications
Sent: Tuesday, March 22, 2011 3:38 PM To: Subject: Fwd: Interoperability between VRS devices
Begin forwarded message:
Prom: @sorenson.com> Date: March 18, 2011 6:38:14 PM MDT To: @zvrs.com> Cc: @sorenson.com> Subject: RE: Interoperability between VRS devices
Hi Carrier
Thank you for the email. I'll have my engineering team look into the packet capture Monday. I'll get back with you on Tuesday, if not sooner.
Have a good weekend,
From: ©zvrs.com Sent: Friday, March 18, 2011 10:22 AM To: Cc: Subject: RE: Interoperability between VRS devices



Attached is a packet capture and what we are seeing is as follows: Our server sends out the H.225 Setup message with Called Party Number included in the Q.931 signaling, but the Sorenson gateway rejects the call with reason code "CalledPartyNotRegistered". So we need to understand why 877-was not being accepted and it is in iTRS. We did see that the local number 727-was not in iTRS.

Indeed, we welcome working with you and your team to get this resolved.

Regards,





From:

@sorenson.com

Sent: Tuesday, March 08, 2011 10:50 AM

To: 'George L. Lyon, Jr'; 'George Sutcliffe'; John Harris; 'Kelby Brick'; Lydia Runnels; 'Mark Stern'; William Banks; William

Cobb

Cc: Mike Maddix; Scot Brooksby

Subject: Interoperability between VRS devices

Friends,

As you know Sorenson recently released a new PC based VRS product. As part of that release we are using a NAT/Firewall traversal server. In some of our testing we have observed that your products are only dialing using the IP address and the dialed phone number is not included in the H.323 signaling – specifically the Called Party Number field is missing. This prevents our server from properly forwarding the call to the Sorenson endpoint product. We wanted to let you know about our observations so that we can maximize interoperability between our devices and best serve our customers. Please let us know if we can provide any additional information that you may need in order to resolve this situation.

Regards,



VP Engineering

Sorenson Communications 4192 South Riverboat Road Salt Lake City, Utah 84123 P. 801

C. 801

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error, please immediately notify me by reply e-mail at <u>a source of the </u>

Attachment E

From:

@sorenson.com]

Sent:

Friday, April 15, 2011 5:30 PM

To:

@zvrs.com

Cc: Subject:

Re: n Touch PC Interop with Z products



Our engineers have seen in the past where early implimentors of the rfc2190 diverged from the standard a little and the rtp payload header was put together a little differently than described in rfc2190. In fact, we did that with our earlier implimentations of our products. Only in our later implimentations did we find out that some of the third-party libraries that we are using in some of our products don't support that divergence. Our VP200s for example would send such a stream to the ntouch PC and therefore we had the same type of interoperability problems between our two implementations.

At that time, we modified the VP200 to be able to negotiate and implement both packetization methods. We have modified our signaling to explicitly Inform the remote system of the support for the rfc2190 packetization in the terminal capability set exchange (TermCapSet) and the opening of the logical channel (OLC). If the rfc2190 packetization is signaled in the termCapSet and the OLC, we use the rfc2190 header; if it isn't present in the signaling, we use the old way. The ntouch PC isn't capable of the old way but it does signal it's capability of the new way.

Some have referred to the divergent way as the "Microsoft way".

While we haven't actually pulled apart the headers that you are sending to us and verified if this is the case, it certainly seems to be likely.

We would recommend that you verify if you are sending using the divergent rtp header or the actual rfc2190 rtp header. If you are using the divergent header, it seems to us that a similar path needs to be considered in your product where you can signal and use either.

Thanks

----Original Message-

From: [@zvrs.com]

Sent: Wednesday, April 13, 2011 1:25 PM

To:

Cc:

Subject: RE: nTouch PC interop with Z products

Yes, we support RFC 2190. All of our endpoints implement RFC 2190 H.263 payload encapsulation (H.263 1996 video, RTP payload type 34).

We cannot solely implement RFC 2429 (H.263+ 1998 or H.263++ 2000, dynamic RTP payload type 96+) due to legacy interoperability issues with other VRS Provider's equipment.

The video issue we are experiencing with the nTouch PC implementation is that we are capable of viewing RFC 2190 (H.263 1996 video, RTP payload type

34) video generated by nTouch PC, but it is not playing the RFC 2190 (H.263

1996 video, RTP payload type 34) video streams that we are sending to it from our various endpoints.

Oddly, at least one of other VRS provider, Convo, is able to place VRS calls to the nTouch PC using what we can only guess is RFC 3984 (H.264 video). We currently are forced to strip H.264 video at our gateways due to interoperability issues with Citrix/Vidsoft's (Purple P3) implementation of H.264.

Your question begs the follow-up question: Are you seeing some divergence from RFC 2190 in the RTP stream we are sending you? We are not seeing it, but perhaps we have overlooked something that your gateway needs?

Look forward to hearing back from you.

Regards,



Vice President Product Development CSDVRS, LLC office

Original Mess From:	表示。	@sorenso	on.com
Sent: Tuesday, A	oril 12, 2011 9		
Cc:		The second second	-
Subject: RE: nTo	ich PC interop	with Z products	

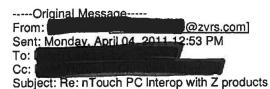


FYI - As of April 8th, Loren is no longer with Sorenson.

We are using and support the rfc2190 standard. Are you alming for the same standard?

Regards,

Test & QA Sr Manager Sorenson Communications



have you made any further progress with this on your side?

We noticed the ECFS filings today, and were a bit confused based on our previous dialog:

http://fjallfoss.fcc.gov/ecfs/comment/view?id=6016374761 http://fjallfoss.fcc.gov/ecfs/document/view?id=7021236663

Please advise as to how we can assist you further in getting the Sorenson nTouch PC to play H.263 video.



>We have made some progress on this today and think we may understand >the issue. As I said I've been out of office today but will begin >working on putting something more specific when I return tomorrow.

> On Mar 29, 2011, at 10:06 AM, wrote:
> Has there been any progress on the nTouch PC H.263/RTP inter-op with >>Z products?
>> Have you run into anything that we might be able to take a look at >>on our side?
>> Thank you for your time!
>> Thank you for your time!

>